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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,453

09/20/2004

Brent A. Anderson

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12/15/2005

SCHMEISER, OLSEN + WATTS

3 LEAR JET LANE

SUITE 201

LATHAM, NY 12110

EXAMINER

DICKEY, THOMAS L

ART UNIT

PAPER NUMBER

2826

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/711,453

Applicant(s)

ANDERSON ET AL.

Examiner

Thomas L. Dickey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 6,17 and 19-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,8,9,13-16 and 18 is/are rejected.
- 7) ☒ Claim(s) 3,7 and 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/20/04; 2/15/05.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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DETAILED ACTION

1. The preliminary amendment filed on 11/16/05 has been entered.

Election/Restriction

2. Applicant's election with traverse of claims 1-5,7-16, and 18 in the reply filed on 11/16/05 is acknowledged. The traversal is on the ground(s) that "[in MPEP 803, second paragraph], it is stated that 'If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions.'" This is not found persuasive because in MPEP 803, ninth paragraph, it is stated that for purposes of the initial requirement, a serious burden on the examiner may be *prima facie* shown if the examiner shows by appropriate explanation of separate classification, or separate status in the art, or a different field of search as defined in **MPEP § 808.02**, noting that in species restriction separate classification, or separate status in the art, or a different field of search is defined in **MPEP § 806.04(a) - § 806.04(i)**. That *prima facie* showing may be rebutted by appropriate showings or evidence by the applicant.

In defining mutually exclusive species **MPEP 806.04(f)** states that where two or more species are claimed, a requirement for restriction to a single species may be

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proper if the species are mutually exclusive. Claims to different species are mutually exclusive if one claim recites limitations disclosed for a first species but not a second, while a second claim recites limitations disclosed only for the second species and not the first. Applicant's claim 5 explicitly requires first and second dielectric layers to extend under a source and a drain, respectively. Applicant's claim 6 explicitly prohibits said first and second dielectric layers from extending to the very places claim 5 requires them to go. Therefore, the claims are properly considered mutually exclusive.

The requirement is still deemed proper and is therefore made FINAL.

Oath/Declaration

3. The oath/declaration filed on 9/20/04 is acceptable.

Drawings

4. The formal drawings filed on 9/20/04 are acceptable.

Priority

5. Applicants have made no claim for priority.

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Information Disclosure Statement

6. The Information Disclosure Statements filed on 9/20/04 and 2/15/05 have been considered.

Specification

7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,4,5,8,9,13-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by ODA ET AL. (2001/0045604).

Oda et al. discloses a field effect transistor comprising a gate electrode 48A formed on a top surface of a gate dielectric layer 46, said gate dielectric layer 46 on a top surface of an N-type doped single-crystal silicon channel region 44, said single-crystal silicon channel region 44 on a top surface of a Ge-comprising layer 43, said Ge-

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comprising layer 43 on a top surface of a single-crystal silicon substrate 1, said Ge-comprising layer 43 between a first dielectric layer 23 and/or 24 (note that there is first parts 23 and 24 formed to the left of, and second parts 23 and 24 formed to the right of, Ge-comprising layer 43) and a second dielectric layer 23 and/or 24 on said top surface of said single-crystal silicon substrate 1; a P-doped polysilicon source region 25a, abutting said single-crystal silicon channel region 44; a single-crystal silicon source region 45 between said polysilicon source region 25a and said single-crystal silicon channel region 44; a P-doped polysilicon drain region 25b, abutting said single-crystal silicon channel region 44 on an opposite side of said single-crystal silicon channel region 44; a single-crystal silicon drain region 45 (note that there are single-crystal source/drain regions 45 on both the source 25a and drain 25b sides of channel 44), between said polysilicon drain region 25b and said single-crystal silicon channel region 44; and a dielectric isolation 3 abutting said polysilicon source and said polysilicon drain, said first and second dielectric layers 23 and/or 24 extending, respectively, under said polysilicon source and said polysilicon drain and abutting said dielectric isolation 3, wherein said first dielectric layer 23 and/or 24 and single-crystal silicon source region 45 extend under a first side of said gate electrode 48A and said polysilicon source and said second dielectric layer 23 and/or 24 and said single-crystal silicon drain region 45 extend under a second and opposite side of said gate electrode 48A and said polysilicon drain, said Ge-comprising layer 43 comprises $\text{Si}_{(1-x)}\text{Ge}_x$ where X equals

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about 0.15 to about 0.5, and said first and second dielectric layers 23 and/or 24 each comprise oxides of silicon and oxides of germanium and induce stress in the crystal lattice of said channel region. Note figures 21-24 and paragraphs 0144-0160 of Oda et al.

Allowable Subject Matter

9. Claims 3,7 and 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

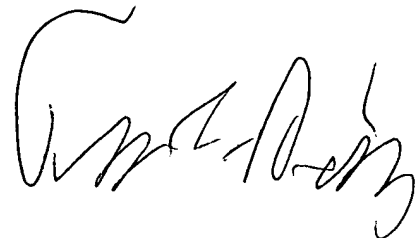
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is 571-272-1913. The examiner can normally be reached on Monday-Thursday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Thomas L. Dickey', is positioned above the printed name.

Thomas L. Dickey
Patent Examiner
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12/05